MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

BAC2624 – MANAGEMENT ACCOUNTING II

(All Sections/Groups)

11 MARCH 2016
3.00 P.M. – 6.00 P.M.

(3 HOURS)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 7 **pages** (exclusive of cover page).
2. **Answer ALL FIVE (5) questions.** All questions carry equal marks and the distribution of the marks for each question is given.
3. Please provide all your answers in the Answer Booklet provided.

Question 1

Ideal Bicycle Sdn. Bhd. (IB) is a highly decentralized company with two divisions, namely, Division X and Division Y.

Division X produces the bicycle frame and Division Y assembles the rest of the bicycle onto the bicycle frame. There is a market for both the bicycle frames and bicycle. Each division has been designated as a profit centre.

The transfer price for bicycle frame has been set at RM330.

Below are the data available for each division:

Division X

	RM
Selling price per unit for bicycle frame to intermediate market	350
Incremental costs per unit Materials RM170 Labour RM100	270
Total fixed overheads per year	30,000
Maximum production capacity	2,000 units
Maximum intermediate market sales demand	1,600 units
Current sales to intermediate market	1,600 units

Division Y

	RM
Selling price per unit for bicycle to final market	800
External purchase price for bicycle frame	350
Incremental costs per unit Materials RM150 Labour RM150	300
Total fixed overheads per year	30,000
Maximum production capacity and maximum sales demand	800 units
Current sales to final market	400 units

Required:

a) Explain what is a transfer price and what is it intended to achieve? (5 marks)

b) Under the current transfer pricing system and current sales arrangement, calculate the operating incomes for Division X, Y and Ideal Bicycle Sdn. Bhd. as a whole. Your sales and costs figures should be split into external sales and internal sales, where appropriate. (5 marks)

c) Assume that Division Y has requested Division X to supply additional 400 units of bicycle frame to meet its sales to external market, should 400 units be transferred to Division Y? At what price? (4 marks)

Continued...

d) Ideal Bicycle Sdn. Bhd. has decided to change the transfer pricing policy and now allows both divisions to negotiate the transfer price of bicycle frame. What is the range of acceptable transfer price? (6 marks)

[TOTAL 20 MARKS]

Question 2

The HomeMade Soap Sdn. Bhd. (HMS) makes environmentally-friendly soap using three basic ingredients. The standard cost card for one batch of soap for the month of September was as follows:

Material	**Kilograms**	**Price per kilogram (RM)**
Lye	0.25	10
Coconut oil	0.6	4
Shea butter	0.5	3

The budget for production and sales in September was 120,000 batches. Actual production and sales were 136,000 batches. The actual ingredients used were as follows:

Material	**Kilograms**
Lye	34,080
Coconut oil	83,232
Shea butter	64,200

In October the materials mix and yield variances were as follows:

Mix : RM6,000 adverse

Yield : RM10,000 favourable

The production manager is pleased with the results overall, stating:

'At the beginning of September I made some changes to the mix of ingredients used for the soaps. As I expected, the mix variance is adverse in both months because we haven't yet updated our standard cost card but, in both months, the favourable yield variance more than makes up for this.

Overall, I think we can be satisfied that the changes made to the product mix are producing good results and now we are able to produce more batches and meet the growing demand for our product.'

The sales manager, however, holds a different view and says:

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'I am not happy with this change in the ingredients mix. I've had to explain to the board why the sales volume variance for October was RM22,000 adverse.

I have tried to explain that the quality of the soap has declined slightly and some of my customers have realised this and simply are not happy but no-one seems to be listening. Some customers are even demanding that the price of the soap be reduced and threatening to go elsewhere if the problem is not sorted out.'

Required:

a) Calculate the total material mix variance and the total material yield variance for September. (10 marks)

b) Briefly explain what the adverse materials mix and favourable materials yield variances indicate about production at HMS in October. (6 marks)

c) Discuss whether the sales manager could be justified in claiming that the change in the materials mix has caused an adverse sales volume variance in October. (4 marks)

[TOTAL 20 MARKS]

Question 3

PART A

You have recently been appointed to the post of business development manager in Max Sdn. Bhd. The company has been a manufacturer of components used in the electronics industry for over 25 years. The product range is based on a number of different standard designs, but customers frequently request minor changes to the standard designs to facilitate their specific requirements.

The company is organised as a traditional hierarchy, and product quality is managed on the basis of statistical control. The company has a good reputation for quality and customer service, but in recent years has been struggling to match the levels of quality and service achieved by its competitors on a regular basis.

One of your key tasks in the immediate future is to achieve the changes which will be necessary to improve the company's competitive position.

One of the directors of Max Sdn. Bhd. has suggested that the company should consider introducing just-in-time (JIT), and you have been asked to advise the board on the implications of this suggestion.

Required:

Outline and discuss the key elements of the just-in-time philosophy. (10 marks)

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PART B

A company produces joint products A, B, and C from a joint process. Information concerning a batch produced in May at a joint cost of RM120,000 was as follows:

	A	B	C	Total
Units sold	2,500	4,000	1,500	8,000
Price (after additional processing)	RM35	RM22	RM15	
Separable Processing Cost	RM35,000	RM12,000	RM16,000	RM63,000
Units Produced	2,500	4,000	1,500	8,000
Total Joint Cost				RM120,000
Sales price at split-off	RM25	RM12	RM13	

Required:

Allocate the joint costs to the joint products using the physical measures method, and calculate the gross margin for each of the three products using the cost allocation for the physical unit method. (10 marks)

Note:
Calculate all ratios, percentages, and unit costs to 2 decimal places, for example 33.33%, and round all RM amounts to the nearest whole RM.

[TOTAL 20 MARKS]

Question 4

Part A

Warisan Machine Tool Company is considering the addition of a computerized lathe to its equipment inventory. The initial cost of the equipment is RM600,000, and the lathe is expected to have a useful life of five years and no salvage value. The cost savings and increased capacity attributable to the machine are estimated to generate increases in the firm's annual cash inflows (before considering depreciation) of RM180,000. The machine will be depreciated as follows for tax purposes: RM200,000 in year 1, RM266,700 in year 2, RM88,860 in year 3, and RM44,440 in year 4.

Warisan is currently in the 40% income tax bracket, and desires a 10% after-tax rate of return.

Required:

a) What is the net present value of the investment? Round to the nearest RM. (4 marks)
b) Should the machine be acquired by the firm, and why? (2 marks)
c) Assume that the equipment will be sold at the end of its useful life for RM100,000. If the depreciation amounts are not revised, calculate the RM impact of this change on the total net present value. (5 marks)

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Part B

Wizz Kids designs and sells soft toys. Its marketing policy involves innovation and as a result each year Wizz Kids comes up with new products.

This year it come up with the product called Boboi for kids. It expects to sell 30,000 Boboi at the rate of RM40 per unit. The direct labor cost for manufacturing this product is RM20 per unit and direct materials used is RM7 per unit. The overhead cost for this project is RM6 per unit.

Required:

Calculate the project cash flow to a change in the following project variables:

a) an increase in the overhead cost by 2%. (2 marks)
b) a decrease in the labour cost by 5%. (2 marks)
c) a decrease in the selling price by RM0.50 and a following increase in the sales volume by 4%. (2 marks)
d) discuss the use of sensitivity analysis as a way of evaluating project risk. (3 marks)

[TOTAL 20 MARKS]

QUESTION 5

Barbie makes toys for children. The company has its own research lab where new toys are designed. Related estimates about revenues and costs for a new toy, Barbie-X, are given below:

Lifecycle units to be manufactured and sold	350,000 toys
Toys per batch for all activities	200
Selling price per toy	RM100
Lifecycle costs:-	
R&D and design cost	RM8,000,000
Manufacturing activity:	
• Variable cost per toy	RM50
• Variable cost per batch	RM150
• Fixed costs	RM900,000
Marketing activity:	
• Variable cost per toy	RM10
• Fixed costs	RM200,000
Distribution activity:	
• Variable cost per batch	RM80
• Fixed costs	RM320,000
Customer-service cost per toy	RM2.00

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Required:

(a) Prepare a statement showing a budgeted lifecycle operating income for Barbie-X. (4 marks)

(b) Calculate the percentage of the budgeted total product lifecycle costs that will be incurred by the end of the R&D and design stages. (2 marks)

(c) The Market Research Department of Barbie has proposed to reduce the price of Barbie-X by RM10. According to their analysis it will increase the forecasted sales by 20%.However if the forecasted sales increase by 20%, the Managing Director (MD) of Barbie plans to increase the manufacturing and distribution batch sizes by 20%. Evaluate the Market Research Department's proposal and advise the MD on whether he should accept the Market Research Department's proposal. (12 marks)

(d) If target price of Barbie-X is RM80 per toy, then calculate the target cost of producing 350,000 units and the cost gap. Barbie expects to earn a profit of 20% on sales. (2 marks)

[TOTAL: 20 MARKS]

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APPENDIX

Future Value of RM1

Period	4%	6%	8%	10%	12%	14%	16%	18%	20%
1	1.040	1.060	1.080	1.100	1.120	1.140	1.160	1.180	1.200
2	1.082	1.124	1.166	1.210	1.254	1.300	1.346	1.393	1.440
3	1.125	1.191	1.260	1.331	1.405	1.482	1.561	1.643	1.728
4	1.170	1.263	1.361	1.464	1.574	1.689	1.811	1.939	2.074
5	1.217	1.338	1.469	1.611	1.762	1.925	2.101	2.288	2.488
6	1.265	1.419	1.587	1.772	1.974	2.195	2.437	2.700	2.986
7	1.316	1.504	1.714	1.949	2.211	2.502	2.827	3.186	3.583
8	1.369	1.594	1.851	2.144	2.476	2.853	3.279	3.759	4.300
9	1.423	1.690	1.999	2.359	2.773	3.252	3.803	4.436	5.160
10	1.480	1.791	2.159	2.594	3.106	3.707	4.412	5.234	6.192

Future Value of a Series of RM1 Cash Flows

Periods	4%	6%	8%	10%	12%	14%	16%	18%	20%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.040	2.060	2.080	2.100	2.120	2.140	2.160	2.180	2.220
3	3.122	3.184	3.246	3.310	3.374	3.440	3.506	3.572	3.640
4	4.247	4.375	4.506	4.641	4.779	4.921	5.067	5.215	5.368
5	5.416	5.637	5.867	6.105	6.353	6.610	6.877	7.154	7.442
6	6.633	6.975	7.336	7.716	8.115	8.536	8.977	9.442	9.930
7	7.898	8.394	8.923	9.487	10.089	10.730	11.414	12.142	12.916
8	9.214	9.898	10.637	11.436	12.300	13.233	14.240	15.327	16.499
9	10.583	11.491	12.488	13.580	14.776	16.085	17.519	19.086	20.799
10	12.006	13.181	14.487	15.938	17.549	19.337	21.321	23.521	25.959

Present Value of RM1

Periods	4%	6%	8%	10%	12%	14%	16%	18%	20%
1	.962	.943	.926	.909	.893	.877	.862	.847	.833
2	.925	.890	.857	.826	.797	.769	.743	.718	.694
3	.889	.840	.794	.751	.712	.675	.641	.609	.579
4	.855	.792	.735	.683	.636	.592	.552	.516	.482
5	.822	.747	.681	.621	.567	.519	.476	.437	.402
6	.790	.705	.630	.564	.507	.456	.410	.370	.335
7	.760	.665	.583	.513	.452	.400	.354	.314	.279
8	.731	.627	.540	.467	.404	.351	.305	.266	.233
9	.703	.592	.500	.424	.361	.308	.263	.225	.194
10	.676	.558	.463	.386	.322	.270	.227	.191	.162

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